No. 37,627. PATENTED FEB. 10, 1863.

A. J. JUDGE.
LUBRICATOR.

Fig 1

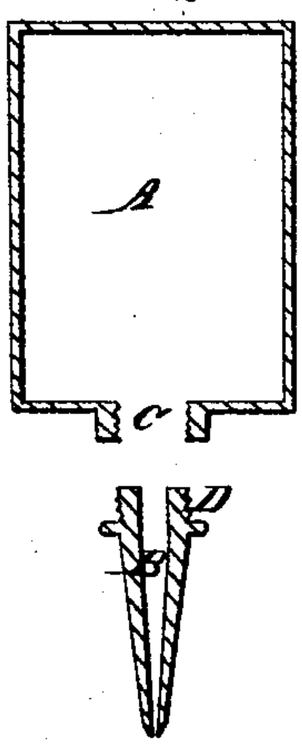


Fig. 2.

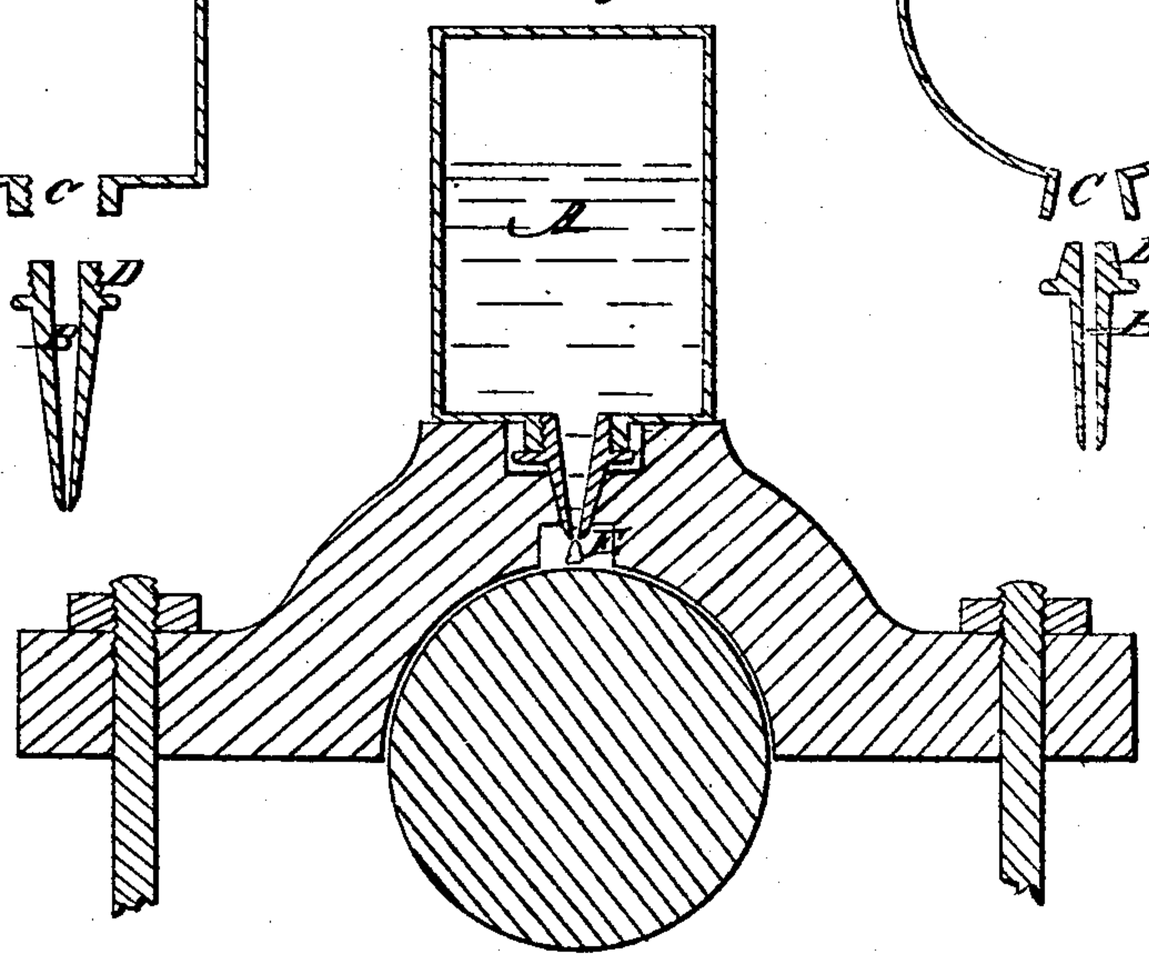


Fig. 3

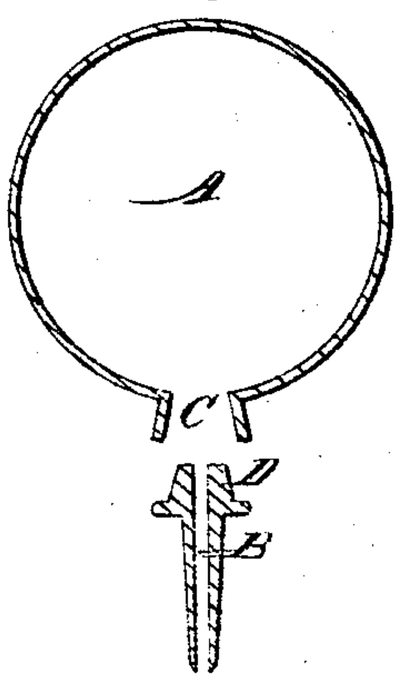
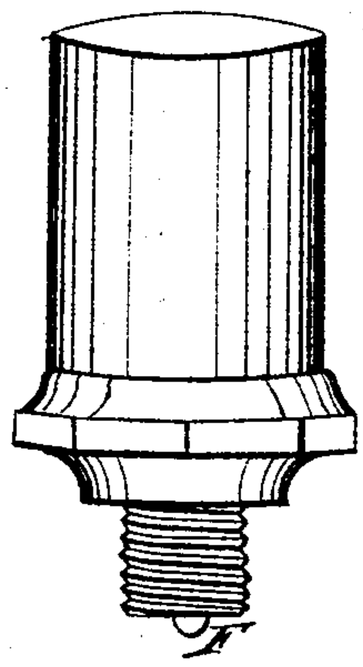


Fig. 4



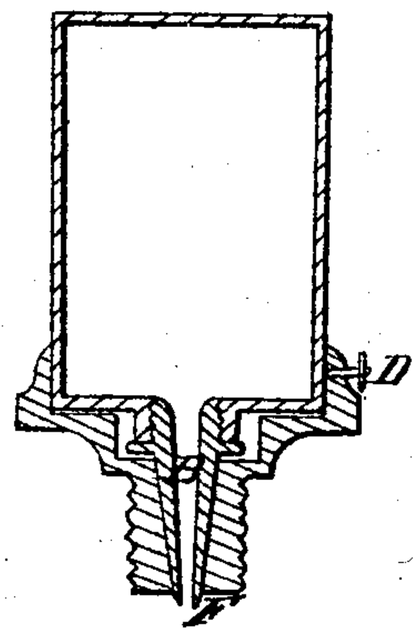
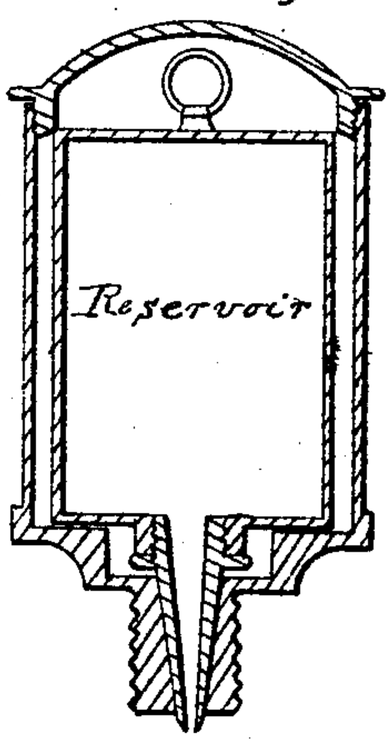


Fig. 5



Witnesses
James H. Lister
Jacob Reed

Inventor.
Arthur J. Judge

UNITED STATES PATENT OFFICE.

ARTHUR J. JUDGE, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **37,627**, dated February 10, 1863.

To all whom it may concern:

Be it known that I, ARTHUR J. JUDGE, of the city of Baltimore, in the county of Baltimore, in the State of Maryland, have invented a new and Improved Self-Feeding Lubricator; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in having the oil or other lubricating material confined by atmospheric pressure in an air-tight chamber made to receive it, the contents of which, being expanded by the heat communicated from the journal, forces out the oil below, thus overcoming the atmospheric pressure at the lower end of the tube, and therefore, as the temperature of the journal increases, and thus demands more oil, in exact proportion is increased the flow or discharge of the oil.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

To hold the oil, I construct a reservoir of any known shape, made of glass, or of either of the various metals, (see A, Figures 1 and 3,) the size to be according to the amount desired to be held, with an opening in the lower part of the reservoir, through which it is filled, C, Figs. 1 and 3. Into this opening is then put the metallic tube B, Figs. 1 and 3, which can be made of any suitable material, tapered or straight, of any desired shape or length, to be fastened in place by either screw, metallic fitting, or corking, (as in the case of glass reservoirs D, Figs. 1 and 3,) through which passes down, when demanded, the oil or lubricating material above.

To complete the whole, is made the socket, Fig. 4, in which the reservoir and tube, when filled, are to be set, the tube passing a short distance below the bottom of the socket, as at F, Fig. 4, so that the liquid, when leaving the tube, will not come in contact with any surrounding metal, which would attract and disturb the regular passage of the liquid in drops on its downward course (shown at E, Fig. 2.)

The socket is intended to be screwed, or otherwise fastened, either directly over the journal, or in any other position where it can be influenced by the varying temperature of the journal, observing, however, in all cases a vertical position for the reservoir, at least so much so that while the reservoir contains oil the tube may always be full.

The opening through the center of the socket should be made to fit the exterior of the tube neatly, so that the communication of heat from the journal to the reservoir will be more direct.

The shape or form of socket may be governed by taste; but being intended as a support for the reservoir, it should be made to accommodate the various forms of the reservoir that may be used.

The socket can be made for movable machinery, to contain the whole reservoir, as at section, Fig. 5; or reservoir can be fastened by either screw or spring to prevent getting out of place, as at D, Fig. 4.

In construction of new machinery where my lubricator is to be used, the socket can be made in the part itself where it is intended to be placed, dispensing with the loose one. (See section, Fig. 2.)

The gentle application of the hand to one of my lubricators, when charged with a little oil, will sufficiently illustrate its sensitiveness to temperature.

My lubricator is applicable to all factory machinery, steam-engines, lathes, sewing-machines, &c.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction of a chamber or reservoir to hold the oil, with an opening in the lower part, so small that atmospheric pressure prevents its escape until expanded by the increased temperature of the journal.

2. The combination of the three parts—viz., the reservoir or cup, the tube, and the socket—in the manner and for the purposes herein specified.

ARTHUR J. JUDGE.

Witnesses:

JAMES H. FISTER,
JACOB REED.